



2016 Fire Season Considerations and Outlook

SWCC Predictive Services

Updated April 18, 2016

Seasonal Fire Potential Main Factors

1. Drought

Big Picture Fuels Complex Conditions

2. Fine Fuels Condition

Fine Fuels Component

3. Seasonal Temperature & Precipitation

Season Setup

4. Spring & early Summer Weather Patterns

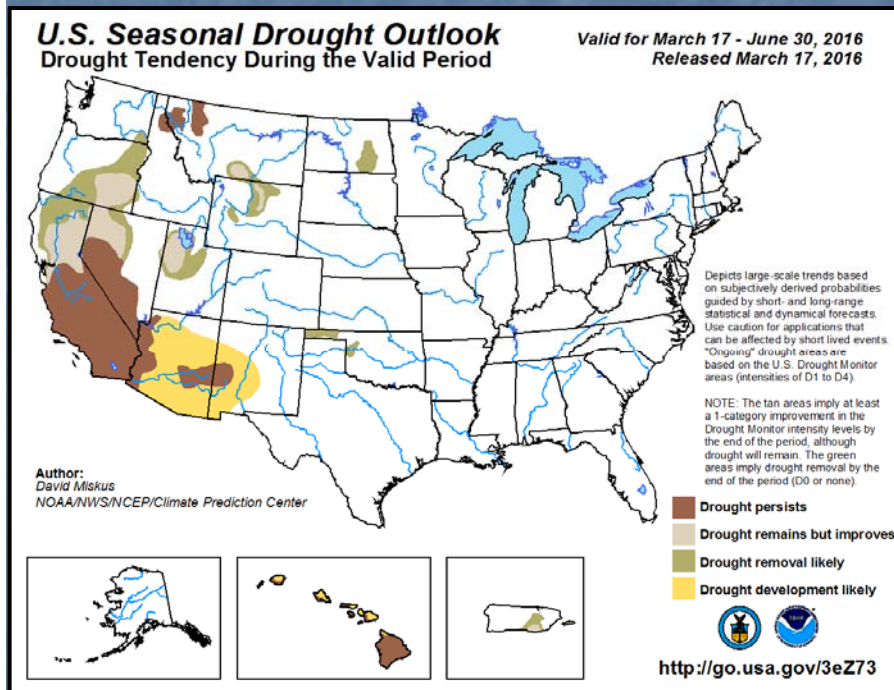
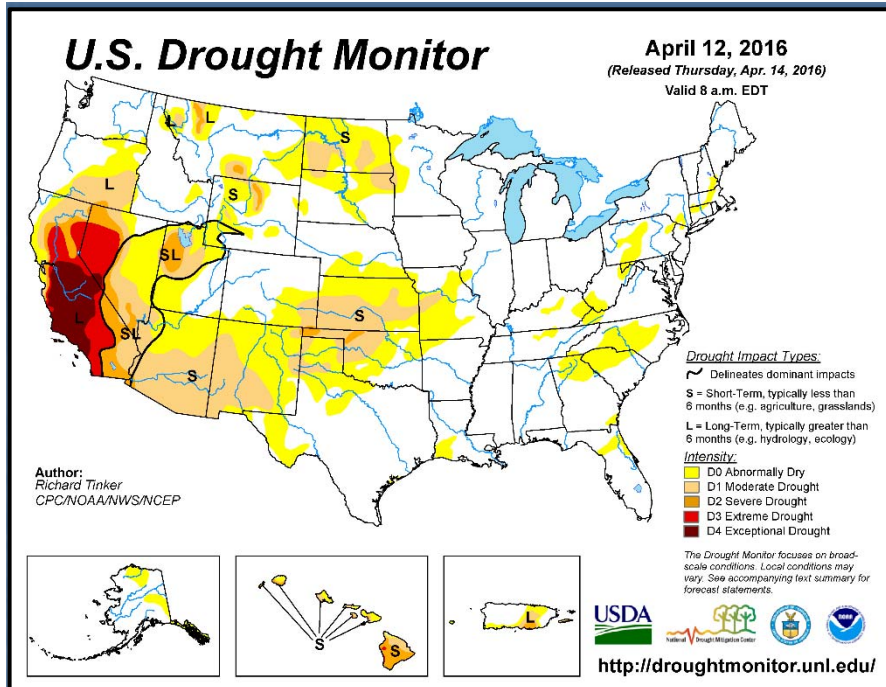
Fire Ignition &
Spread

5. Monsoon

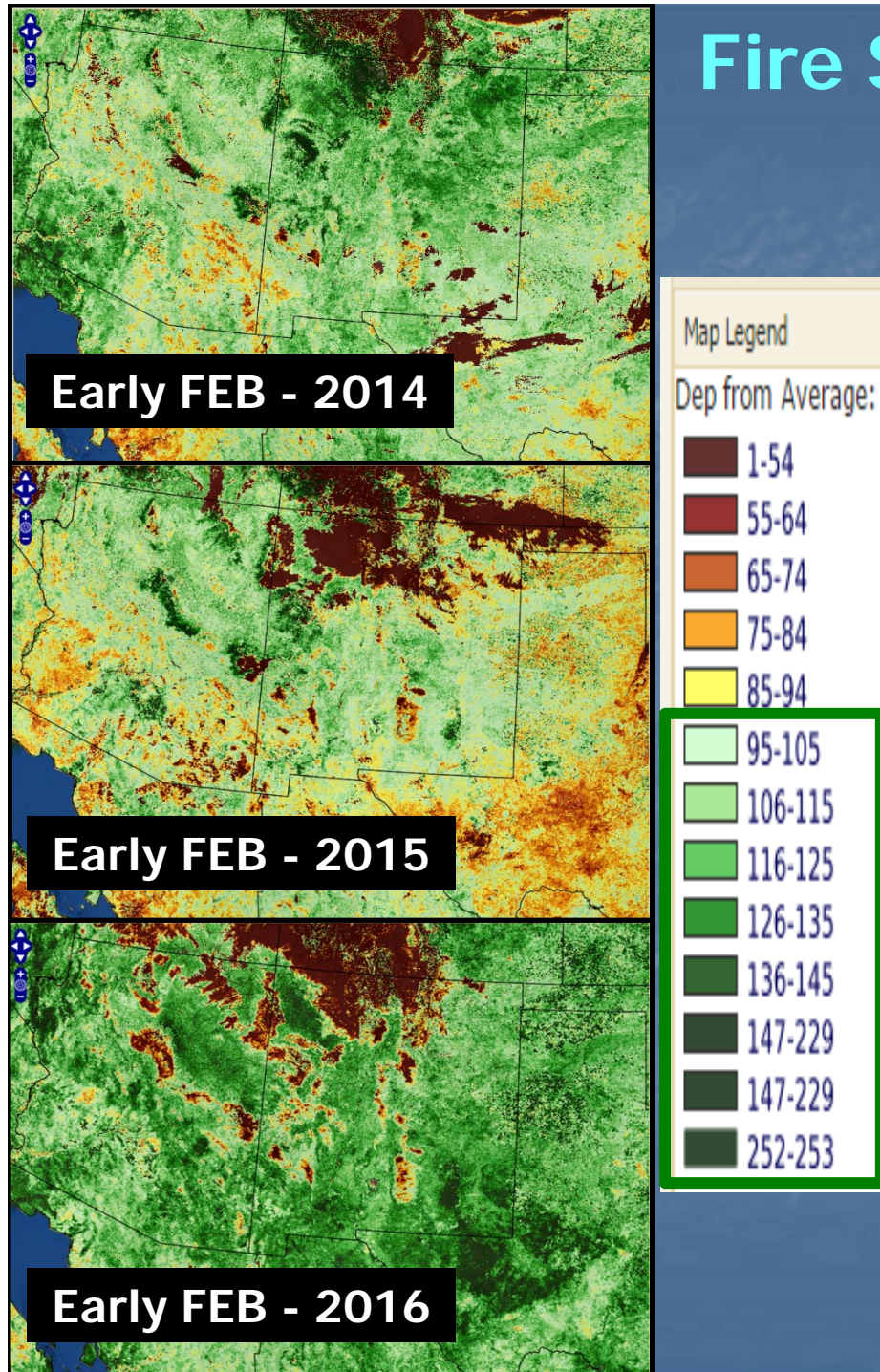
Season End

Fire Season 2016: Drought

- Short-term drought has returned west of the divide, but expected this to be re-evaluated in light of recent and expected precip.
- Drought outlook calls for **minimal drought impacts** across the majority of the Southwest through spring! (wetter update expected)
- 2016 fire season setting up to occur without significant drought conditions in place...a rarity over the past 15 years.
- *Least drought impact since the onset of the 2010 fire season.*



Fire Season 2016: Fine Fuels



- Fine fuels loading and continuity often increase under the same conditions that mitigate drought.
- Images here depict the Departure from Average of fine fuels conditions in early FEB since 2014. This typically depicts **fine fuel loading**, relative to normal.
- Wetter conditions over the past several years have led to an Above Normal amount of fine fuels carrying over into the winter
- **2016 features a bumper crop of carryover fine fuels**. Snow compaction, grazing impacts, and spring green-up are additional factors to be considered.

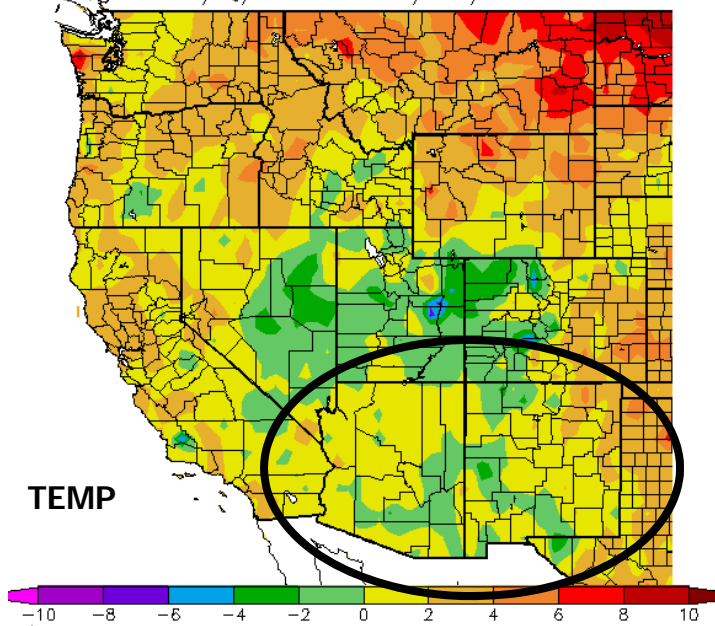
Fine Fuels Growth Example

June 2015



Salt Point_Navajo_June18_2015

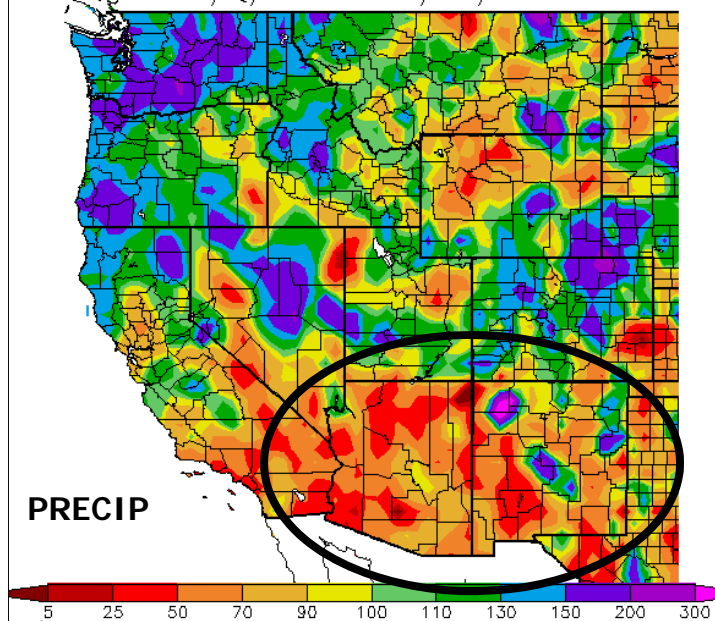
Ave. Temperature dep from Ave (deg F)
12/2/2015 – 2/29/2016



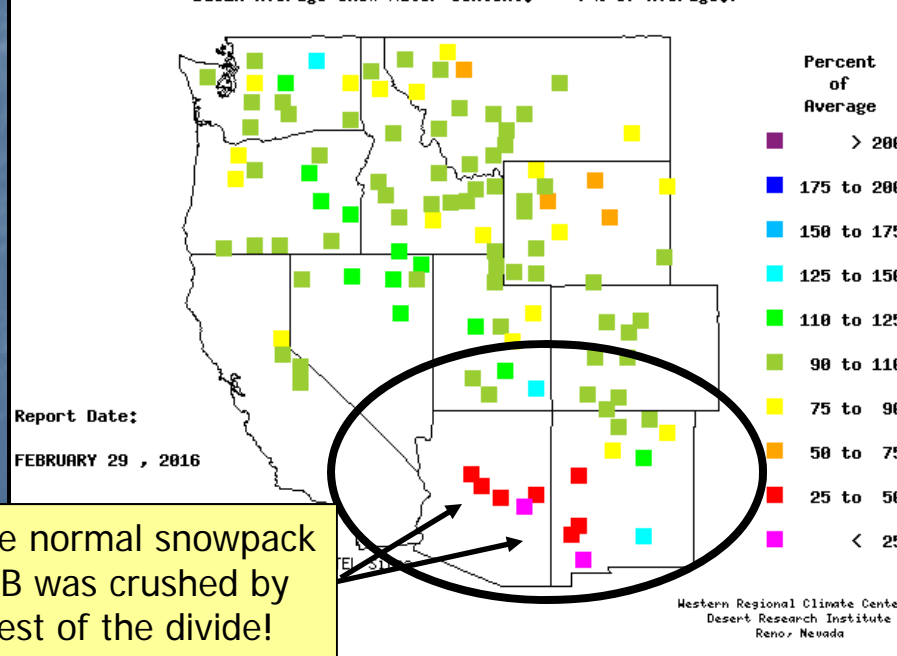
Fire Season 2016: Winter (DEC '15 – FEB'16) Temperature & Precipitation

- Cooler west and warmer east but overall near normal.
- Variable precipitation, but including a few major winter storms in DEC/JAN with widespread impacts. FEB was dry!
- Warm/dry FEB offset a cool/moist DEC/JAN

Percent of Average Precipitation (%)
12/2/2015 – 2/29/2016



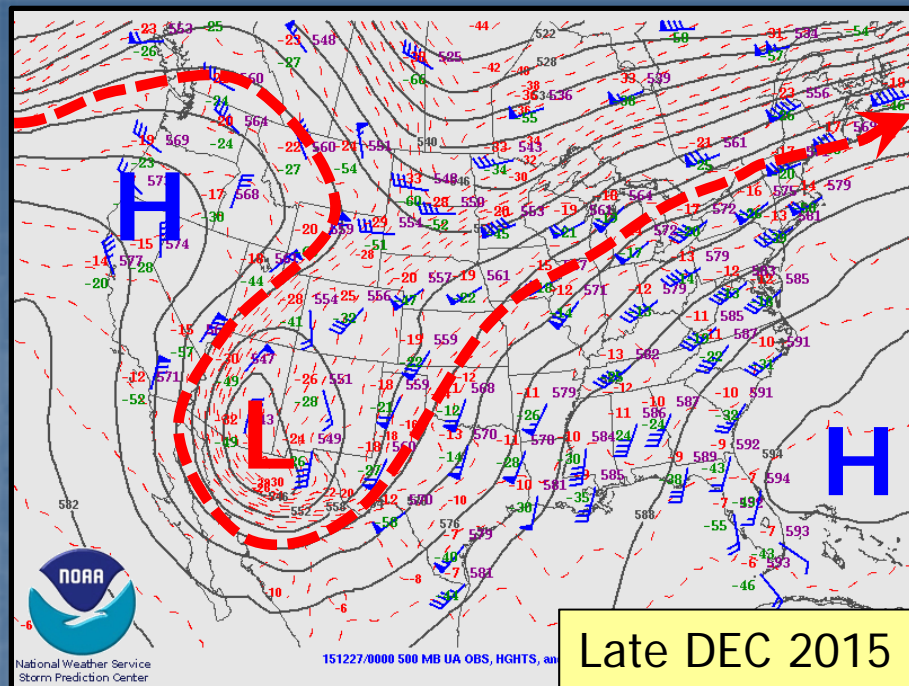
Basin Average Snow Water Content. (% of Average.)



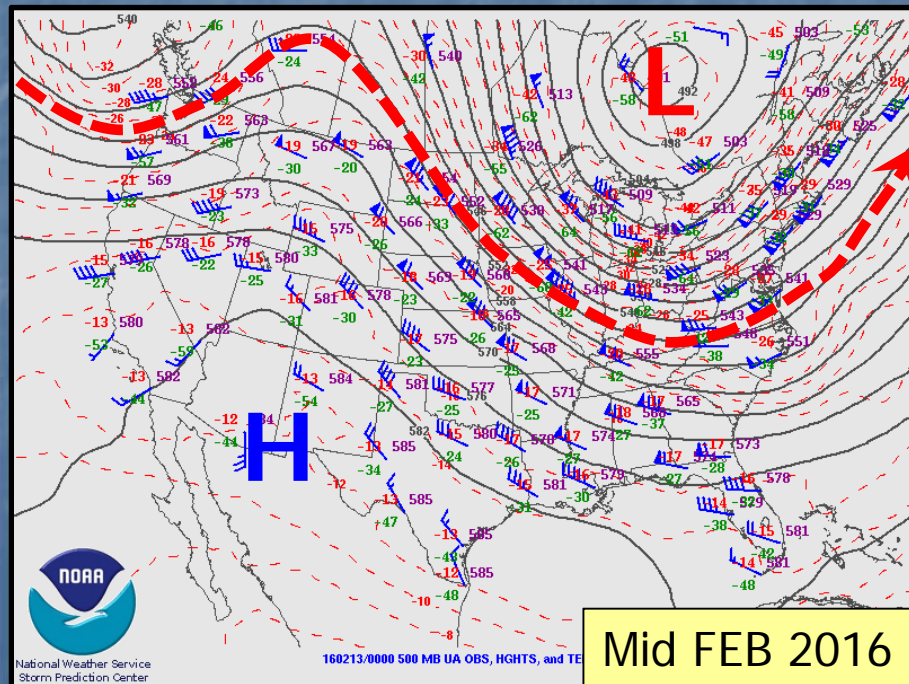
Uniformly above normal snowpack
as of early FEB was crushed by
early MAR west of the divide!

Fire Season 2016: Winter/Spring - Feast or Famine?

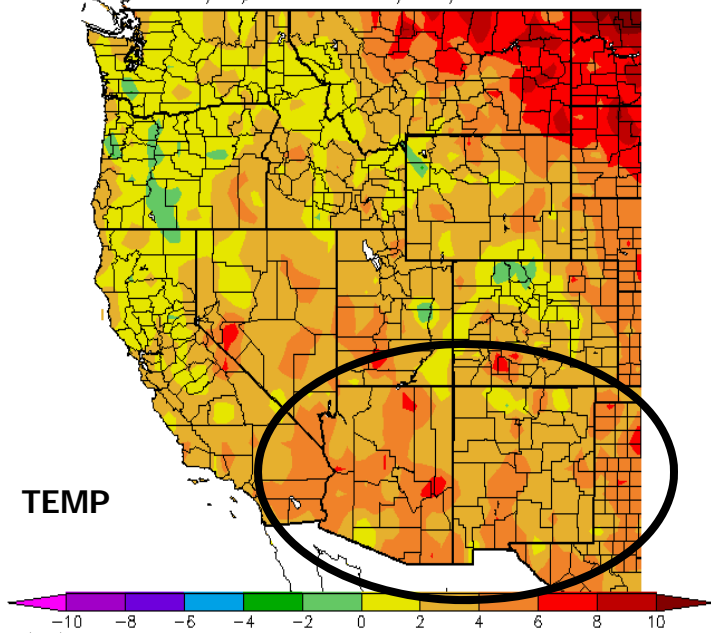
- Feast with troughs...



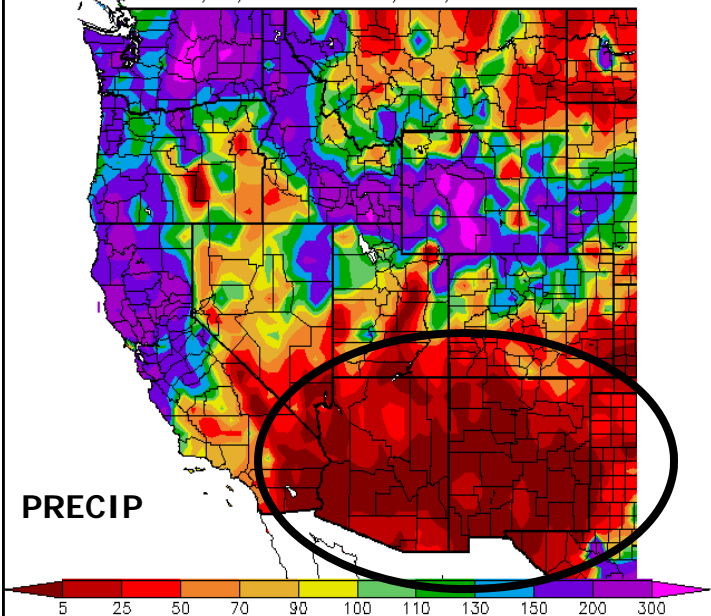
- Famine with ridges...



Ave. Temperature dep from Ave (deg F)
3/1/2016 - 3/30/2016



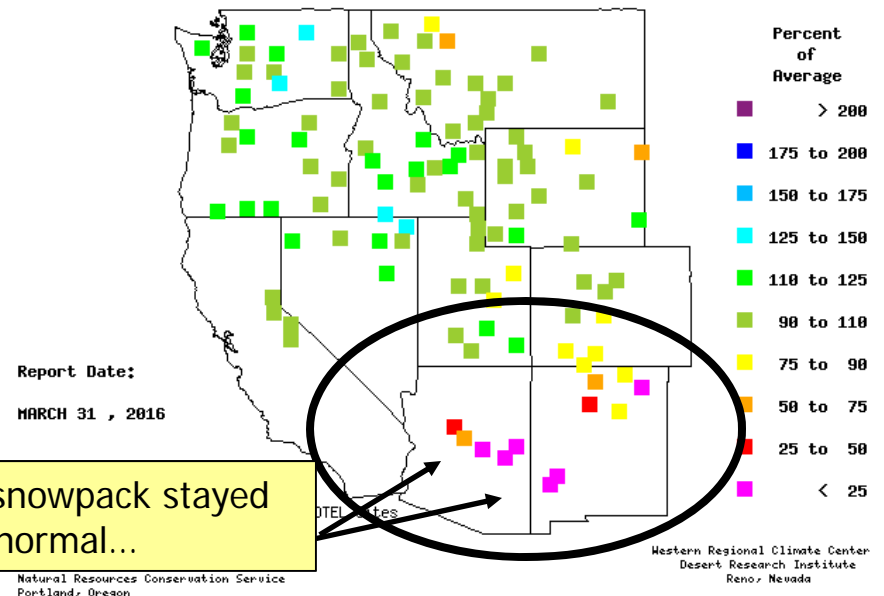
Percent of Average Precipitation (%)
3/1/2016 - 3/30/2016



Fire Season 2016: Spring (MAR '16) Temperature & Precipitation

- Warm & dry, largely a continuation of the 'famine' from mid-FEB.

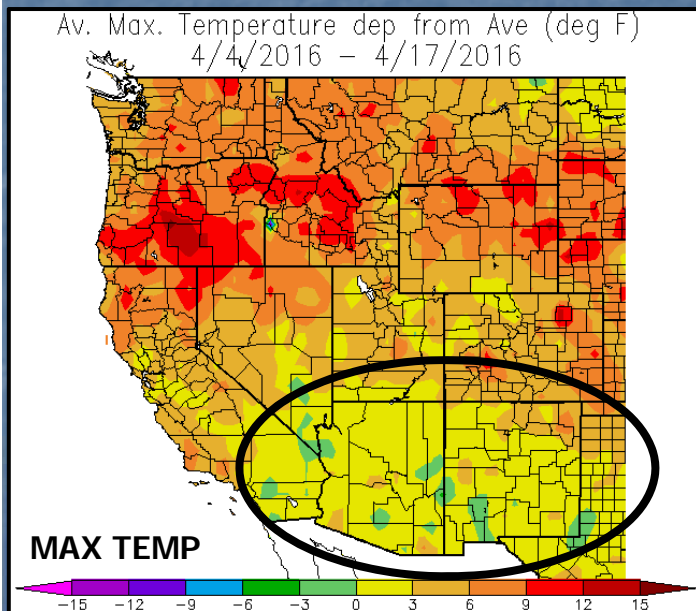
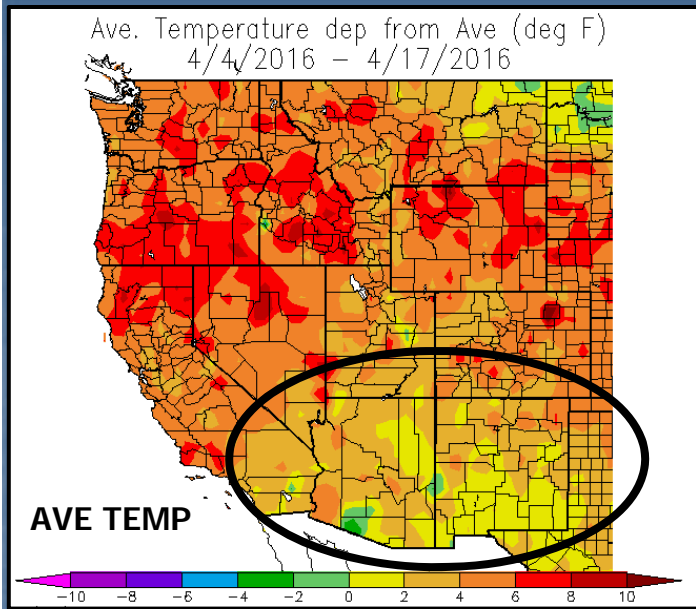
Basin Average Snow Water Content. (% of Average.)



Below normal snowpack stayed below normal...

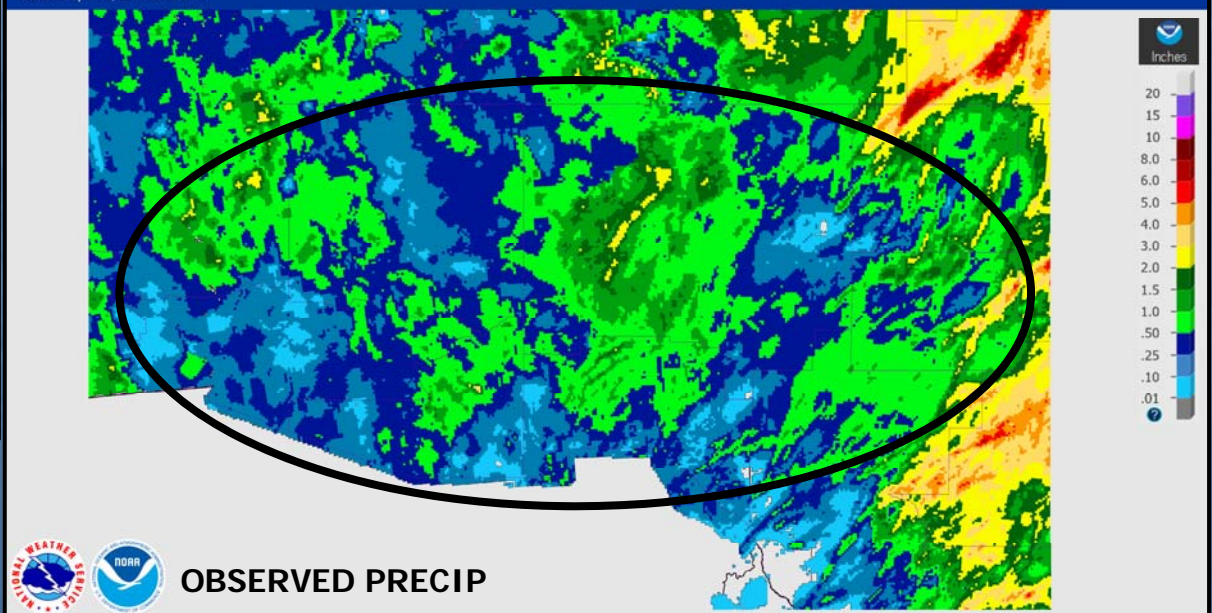
Fire Season 2016: Spring (Early APR '16) Temperature & Precipitation

- **Cool** and **moist**, moving strongly back into 'feast' mode.



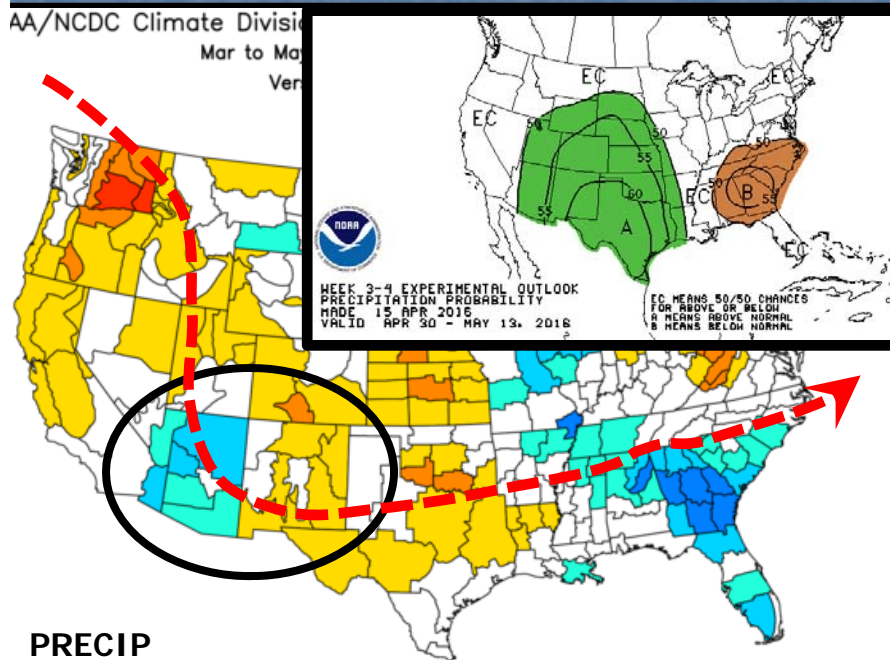
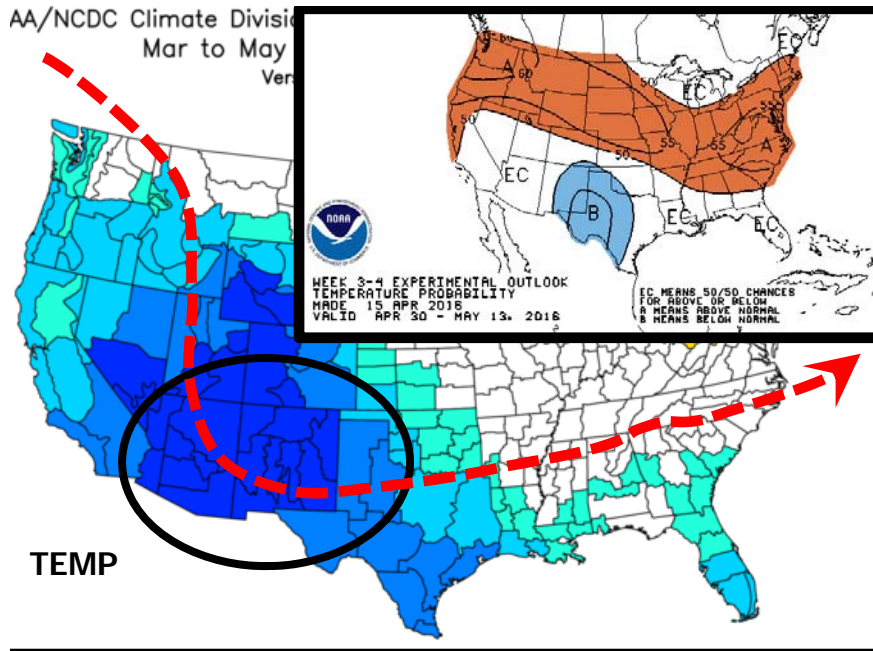
April 18, 2016 14-Day Observed Precipitation

Created on: April 18, 2016 - 20:09 UTC
Valid on: April 18, 2016 12:00 UTC

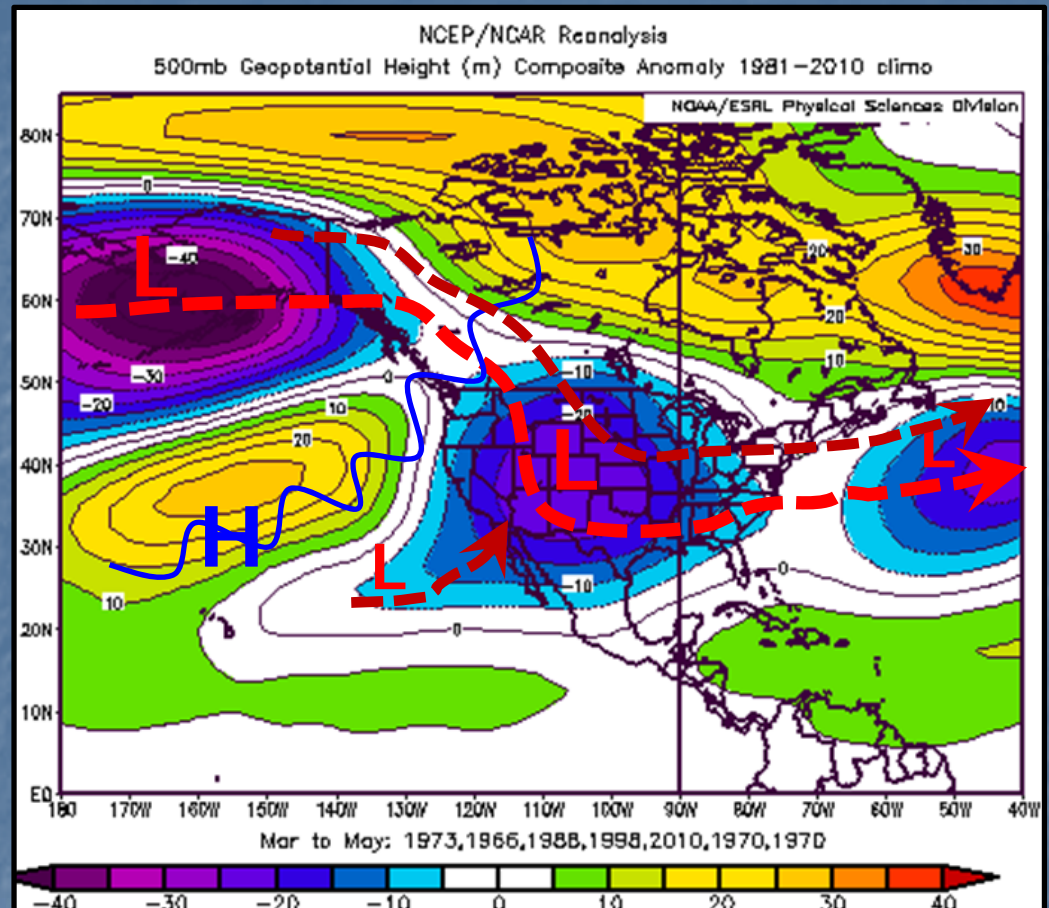
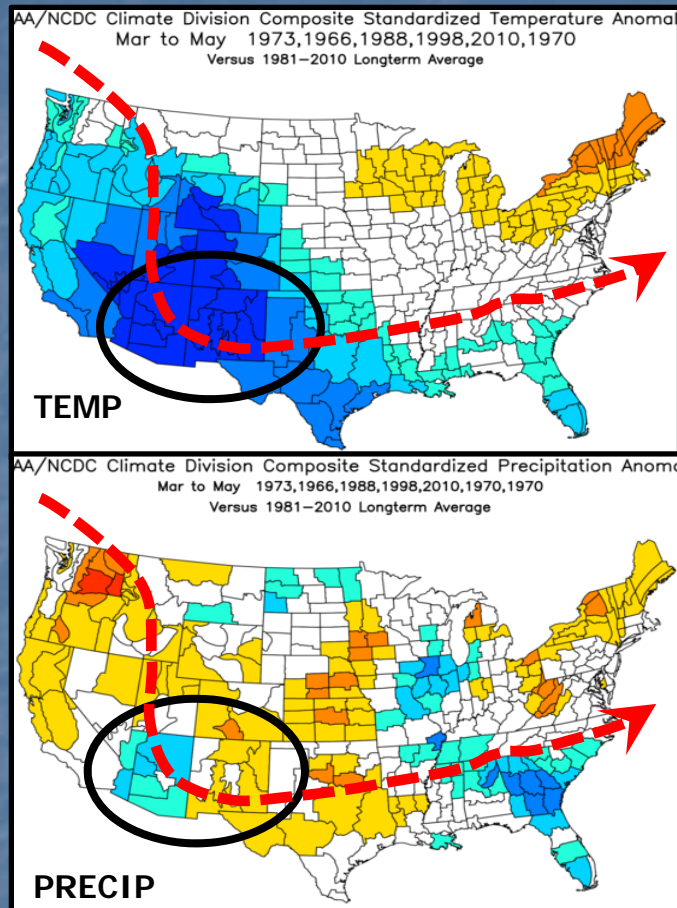


Fire Season 2016: APR – MAY Temp & Precip Anomalies

- Continuation of APR active pattern through as long as mid-MAY will persist variable but overall **cooler** and **wetter** conditions.
- High variability and uncertainty, but overall staying in 'feast' mode a while longer.



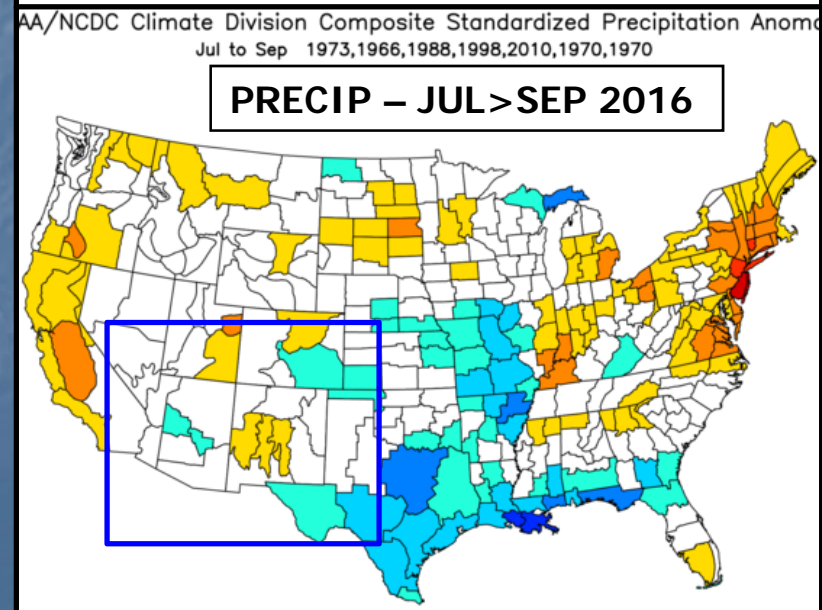
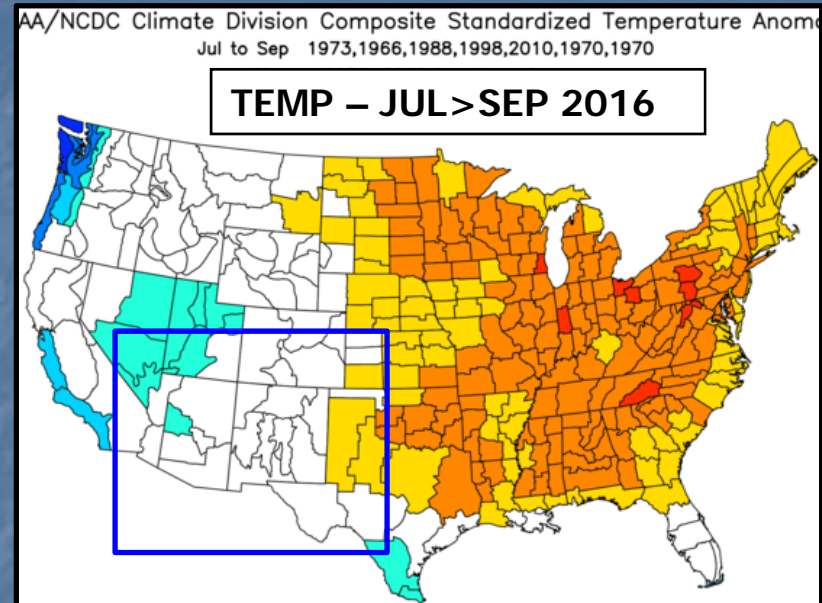
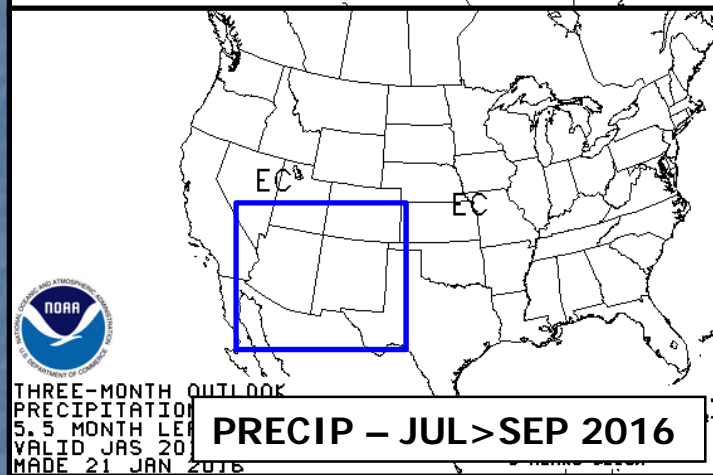
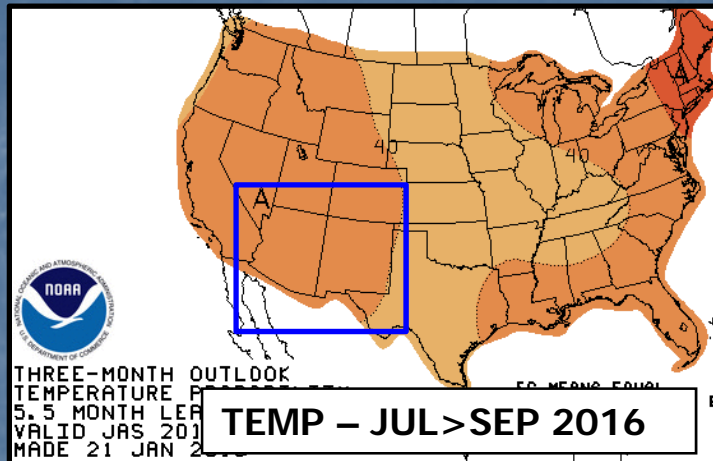
Fire Season 2016: Spring & Early Summer Weather Pattern – Jet Stream(s)



- Jet stream/storm track variations to drive both eventual climate anomalies and tendency for critical fire weather events
- Certainly some windy/dry and some lightning, but long-term/widespread critical conditions not expected until June.

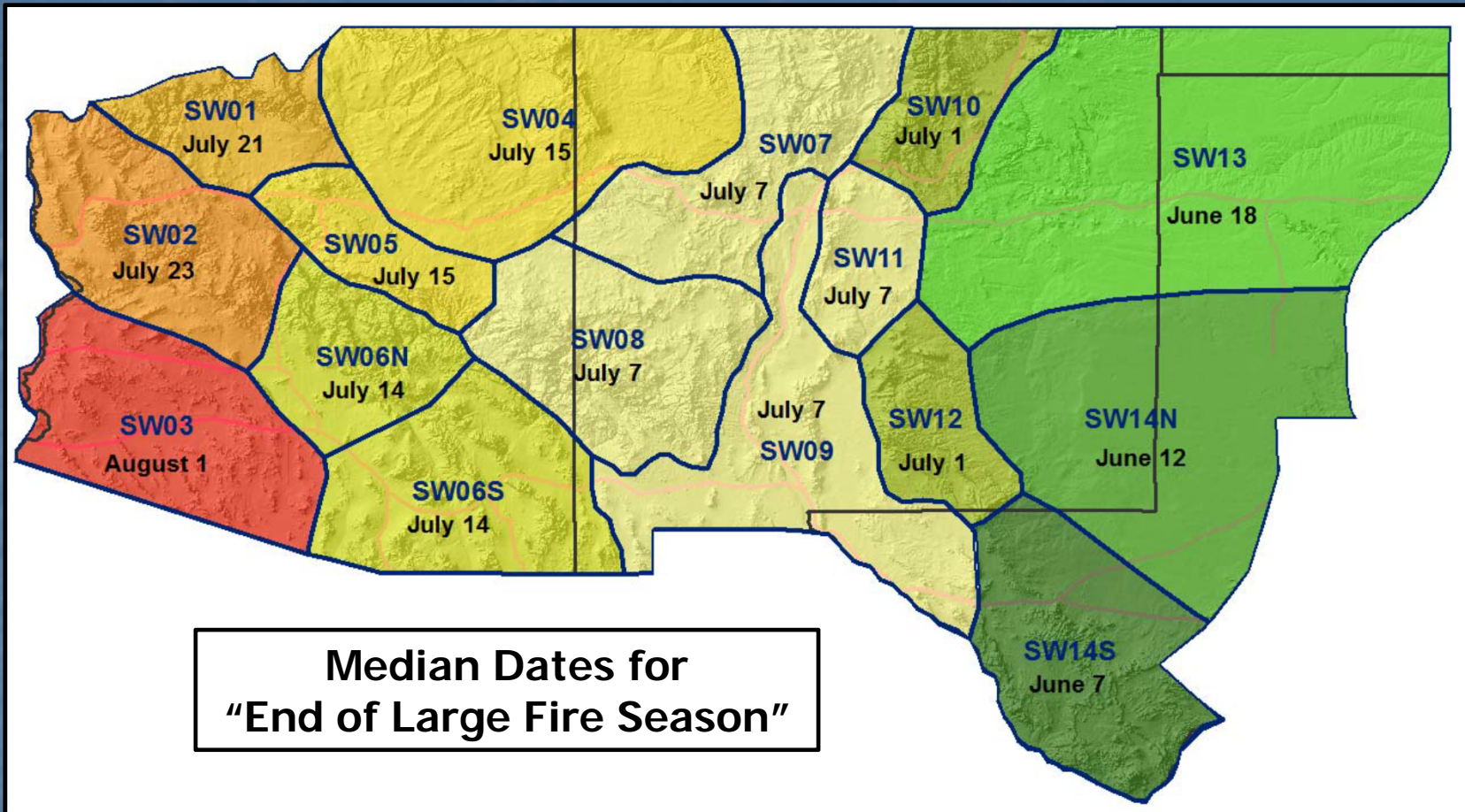
Fire Season 2016: Monsoon?

JULY-SEPT 2016 – Temp & Rainfall Relative to Average



- No clear signal at this time. A lot will depend on how long the current active weather pattern lingers through the spring.

Fire Season 2016: Monsoon



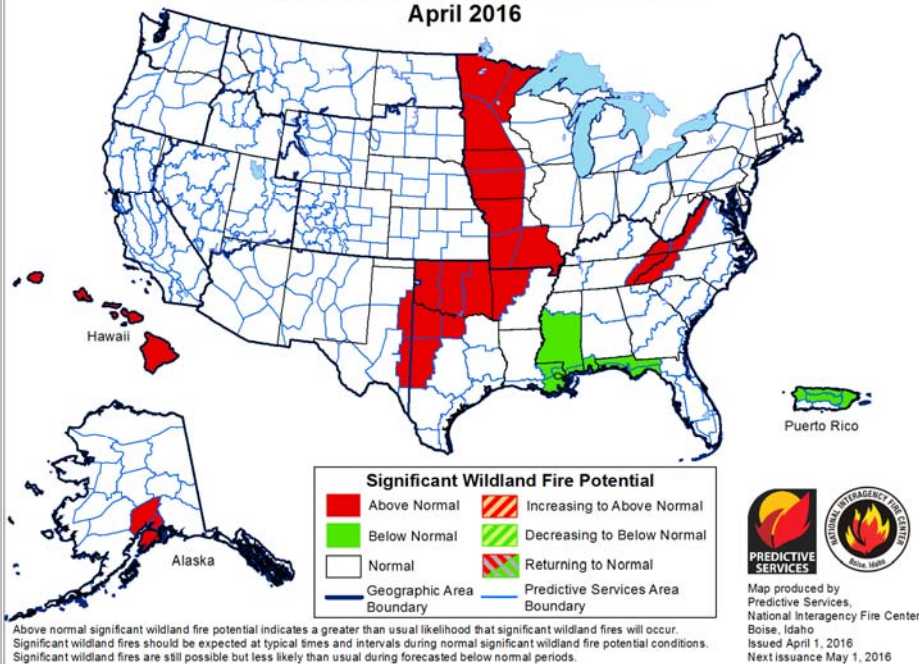
- For Reference: Median dates for end of 'large fire' season.
- (Hint: Time between these dates and when the spring 'feast' winds down = main fire season)

2016 Fire Season Factors Summary

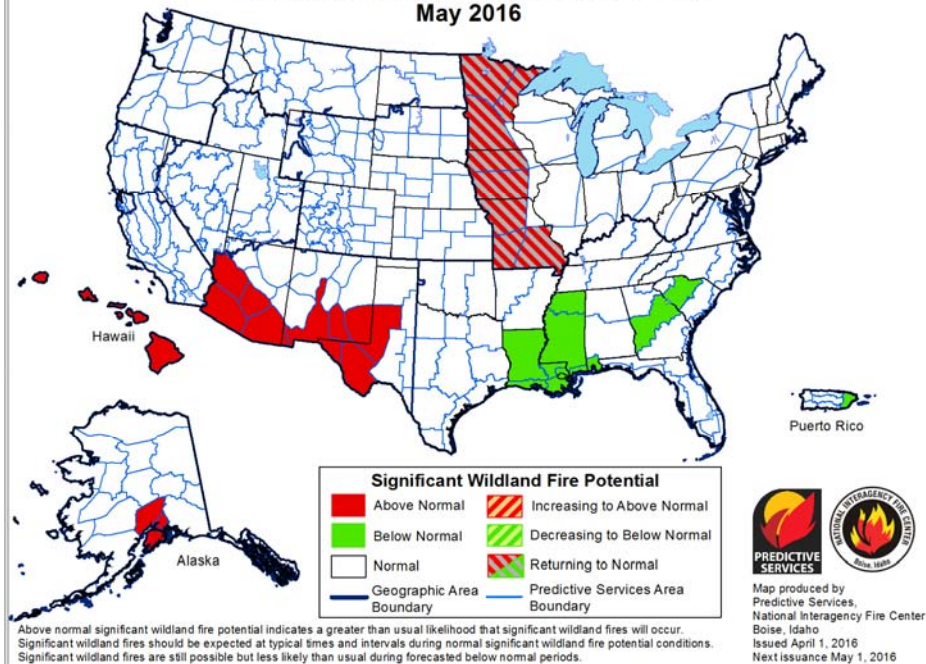
1. Drought – Largely mitigated! More typical “top down” drying to be expected, with heavier fuels regimes not coming into play until later in the season. (This could be challenged further west in the area)
2. Fine Fuels Condition – **Bumper crop year**, but there has been some snow compaction and other disturbances.
3. Seasonal Temperature & Precipitation – **Cooler** and generally **more moist** overall trend on average for winter>spring (DEC>MAY), but with high variability.
4. Spring & Early Summer Weather Pattern – Active jet stream likely to intrude into or near the area from the NW, keeping high week to week variability with periodic windy and dry conditions. Generally, minimal ‘alignment’ of sustained critical fire weather conditions.
5. Monsoon – No clear signal at this time.

Day to day/week to week weather variability and the fine fuels bumper crop will most likely drive the 2016 fire season

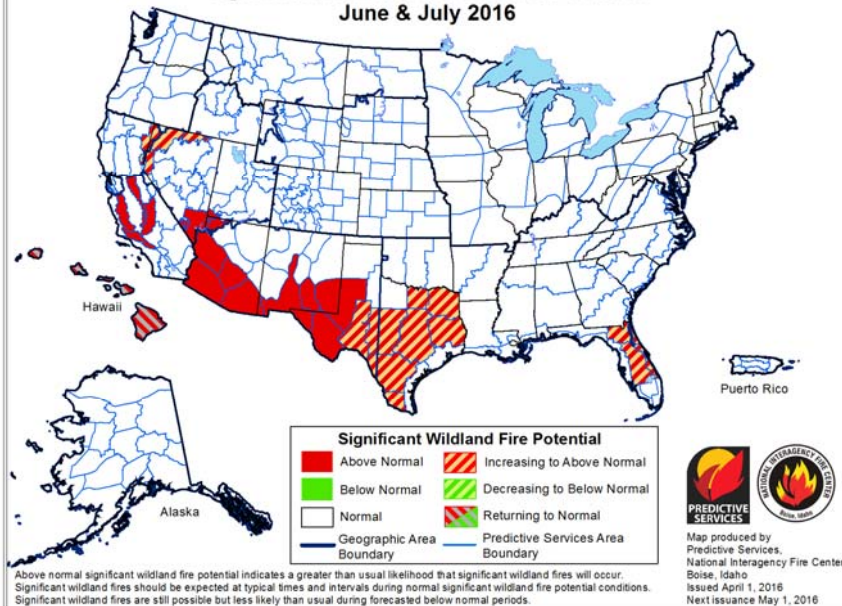
Significant Wildland Fire Potential Outlook April 2016



Significant Wildland Fire Potential Outlook May 2016



Significant Wildland Fire Potential Outlook June & July 2016





END

SWCC Predictive Services

Next Update: Mid May 2016

Contact: SWCC Predictive Services
505-842-3473

Consult the Outlooks Page (Below) for Updated Information Through Fire Season:
<http://gacc.nifc.gov/swcc/predictive/outlooks/outlooks.htm>